







Medical Alumni Bulletin

# HARVARD

Jan./Feb. 1971

**Pioneer in Modern Medicine  
David Linn Edsall  
of Harvard**

Joseph C. Aub, M.D.  
Ruth K. Hapgood



The negative power of anxiety...

# This man thinks he may never work again.





The patient who has had a myocardial infarction is usually advised by his physician to avoid emotional excitement. All too often his family, acutely concerned, transmits its anxiety to him, urging him to "rest, rest."

#### How anxiety may interfere

In a study of 336 males who had suffered at least one myocardial infarction, Sigler<sup>1</sup> reports that manual workers showed the lowest percentage of patients returning to work, compared to clerical workers, business and professional men. The author notes that in many cases the mere apprehension that "return to work would shorten life prevents the patient from resuming activities." It is also well known that emotional disturbance is probably the most common cause of cardiac disability in postinfarction cases.<sup>1</sup>

The anxiety factor in both *coronary* and *precoronary* patients has recently been discussed by Thomas,<sup>2</sup> who suggests: "Intensive investigation of the sources and kinds of anxiety, and how destructive forms of anxiety can be identified and relieved may be the next important step in the prevention of coronary heart disease."

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References: 1. Sigler, L. H.: *Geriatrics*, 22:(9) 97, 1967. 2. Thomas, C. B.: *Johns Hopkins Med. J.*, 122:69, 1968.

Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** Indicated when anxiety, tension and apprehension are significant components of the clinical profile.

**Contraindications:** Patients with known hypersensitivity to the drug.

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**Precautions:** In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating

drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

**Adverse Reactions:** Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

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EPIDAUROS, IZMIR (Smyrna) the BOSPORUS and DARDENELLES. The cruise through the beautiful waters of the Aegean will visit such famous islands as CRETE with the Palace of Knossos; RHODES, noted for its great Crusader castles; the windmills of picturesque MYKONOS; the sacred island of DELOS; and the charming islands of PATMOS and HYDRA. Total cost is \$1299 from New York. Departures in April, May, July, August, September and October, 1971.

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**COVER:** For the first time in its history, the Harvard Medical Alumni Association has become a publisher. Pictured on our cover this month is the book, a biography of David Linn Edsall. George W. Corner, executive officer of the American Philosophical Society, says: "This is a very readable and thorough biography of a distinguished medical scientist, educator, and administrator. More than that, it is an important addition to the history of twentieth-century medical education in the United States." A review of the book appears on page 23.

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*The opinions of contributors to the Bulletin do not  
 necessarily reflect those of the Editorial Staff.*

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# Affiliated Hospitals Center

RICHARD D. WITTRUP

ON April 22, 1960, Dr. George Packer Berry, then Dean of the Harvard Medical School, wrote a letter to the presidents of six hospitals, all affiliated with the school, suggesting that study be given to "the feasibility of drawing these institutions into closer relationship in order to create an organization better designed to meet our growing opportunities and responsibilities for patient care, teaching, and research" and "the possibility of bringing these hospitals together in new and contiguous facilities."

Today, nearly eleven years later, the finishing touches are being applied to plans for a new medical complex to house four of the institutions to which Dean Berry's letter was addressed. These are the Boston Lying-in Hospital, and the Free Hospital for Women (since merged to become the present Boston Hospital for Women), the Peter Bent Brigham Hospital, and the Robert B. Brigham Hospital.

Dean Berry's initiative formally marked the beginning of a planning effort, the long, and at times, difficult history of which has amply demonstrated the boldness and vision with which he spoke. The task of conceptualizing, communicating,

and gaining acceptance for a set of physical and organizational relationships which, on the one hand, would achieve the objectives proposed and, on the other, were feasible in terms of the financial, legal, and other practical considerations that had to be satisfied, has proved challenging, to say the least.

By 1963, the project had become known as Affiliated Hospitals Center, a name it has carried throughout the intervening period, during which plans have undergone continuing evolution. The present phase of planning dates back to June 1967 when the institutions which will occupy

the new complex entered into a Joint Venture Agreement. Working together under the terms of that Agreement, the hospitals first visualized a unified structure to be jointly owned, occupied, and financed. Rapidly inflating construction costs, cutbacks in federal funding of teaching hospital capital needs, and a shift of national policy towards borrowing as a source of capital for hospitals combined by mid-1969 to compel a revision of that scheme.

The complex now designed will consist of three interconnected structures, one for each hospital. Each hospital's patient care facilities and research laboratories will be located in that hospital's structure. Most supporting service activities will be centralized, each in one of the structures. Interhospital contracts are



being drawn up under which these centralized services will be provided to the individual hospitals.

In his 1960 letter, Dean Berry noted "the importance of the preservation of the corporate and professional identities of the individual hospitals." This concept has remained unchanged. It was repeated in the Joint Venture Agreement.

Accordingly, the first objective

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The hospitals from left to right are: Robert Breck Brigham; Boston Hospital for Women — Parkway Division and Lying-in Division; Peter Bent Brigham.



of the planning effort is to improve the capabilities of each institution to meet its continuing program commitments including those for community service. As is being documented by this series of articles on "Harvard Medicine and the Community," these commitments are extensive, indeed.

The hospitals are conducting these programs under serious handicaps. Housed in structures built over half a century ago, they struggle daily with overcrowding and the inefficiencies associated with outmoded and outworn buildings. Their specific program objectives, once strengthened by specialty status, now require a setting more conducive to interdisciplinary collaboration. The growing complexity and specialization of supporting service

now taken largely for granted, so that the connection between that activity and community service is sometimes overlooked. It is understandable that needs of which we have more recently become aware should command our current interest. In 1970, the care of inpatients, complex and expensive though it is, proceeds routinely enough so that there has been some decline in the public attention it once received.

For this reason it may be worth repeating the obvious, which is that the wards of the teaching hospital provide an essential service to the community and, in addition, are central to the hospital's many missions within the grand triad of patient care, teaching, and research. Certainly the expanded efforts being mounted in what has come to be

known as Community Medicine depend for their very lifeblood and backup support on the ongoing inpatient and supporting service programs of the hospital.

It is for this reason that the Affiliated Hospitals are proceeding with such a sense of urgency to replace their existing buildings and to become part of a larger setting, broadly comprehensive in scope. Only by so doing can they assure their continuing ability to discharge their responsibilities to the community.

A certain discipline has been required to keep first things first. In various stages of development are plans for more comprehensive ambulatory care programs, for new kinds of cooperative approaches to the provision of service at the primary care level, and for more unified collaboration with community service efforts being undertaken by other health agencies within and outside the Harvard Medical "family," all of which will become possible once the new complex comes into being.

The new Affiliated Hospitals Center complex will begin to emerge from the ground 18 to 24 months hence and is scheduled for occupancy in 1975. The three hospitals will include a total of about 900 beds. The hospitals eagerly look forward to new and modern facilities from which to conduct their many programs of community service.

functions create a need to consolidate scarce skills and expensive equipment.

Too recently our nation has become openly concerned about the need for renewal of our great cities and about the crisis in the delivery of health services. Like the rest of the inner city, the Affiliated Hospitals and other urban medical centers are themselves overdue for renewal. For these institutions, public service is the *raison d'être* so that responding to the health care crisis is, in the words of St. Paul, their "reasonable service" (Romans 12:1).

That hospitals should provide inpatient care to the acutely ill is by



**T**O be attacked by a condor, preside at the public unwrapping of a mummy, preserve the eye from a cannibalized head are not, as far as I know, the requirements for the present Admission Committee at the Harvard Medical School, or for some morbid, occult, psychopathic cult, but are, in fact, the life experiences of a gentle, erudite man — Charles Pickering (1805-1878). Considered, "the best all round naturalist of his time," Pickering was graduated from the Harvard Medical School in 1826 and was an eminent botanist and pioneer anthropologist.

A scion of the intellectually noble Pickering clan of Salem, Charles was born at Starucca Creek, on the Upper Susquehanna, Pennsylvania, on a grant of land made to his grandfather, Colonel Timothy Pickering. The Colonel was a statesman of the Revolution, had headed every executive department of the federal government under Washington, and later became a congressman. Charles, who grew up in the household of his grandfather, was extremely modest; one suspects that this might have been a reaction to close association with the grandfather who was, as an articulate young lady noted, "a great egotist and has a most exalted opinion of himself, probably well founded." Charles' father, Timothy, Jr., was graduated from Harvard College, entered the Navy and served creditably as a midshipman under Decatur until 1801. He died in 1809 and left his wife Lurena and two sons, Charles and Edward, to the care of the Colonel who moved to Wenham, Massachusetts.

Young Charles had a taste for natural history early in life, roaming the country in search of birds, eggs, insects, plants, and animals. He entered Harvard College in 1823 and came under the influence of William Dandridge Park, the Massachusetts Professor of Natural History at Harvard. Another early influence was the botanist William Oakes of Ipswich. In the summer of 1825, Oakes and Pickering, then graduate students in law and med-

icine respectively, went on a botanical trip to the White Mountains. This was a most influential expedition, since it stimulated Pickering's interest in the geographical distribution of plants which was to be his life long interest. His early conclusions were given in a paper he read at the American Philosophical Society in 1827:

In our own country there is perhaps, as yet, no part where we cannot form an idea of the vegetation as unmodified by human agency. At the same time the tract of flat land along our coast is peculiarly favorable for determining the limits of plants which can be done with accuracy to within a degree of latitude.

He was also encouraged in natural history by Thomas Nuttall — the early botanist and ornithologist of Harvard.

### Hottentot Race



## CONDORS AND CANNIBALS

Pickering was a member of the Class of 1823 at Harvard but left before graduation, preferring medicine. He took the M.D. at Harvard Medical School in 1826. He came under the tutelage of the giants of those times, Jacob Bigelow, John Warren, George Cheyne Shattuck, George Hayward, and Walter Channing, but they did not hold him in Boston.

He was elected a correspondent of the Academy of Natural Sciences of Philadelphia in 1826 when 22 and the next year he moved to Philadelphia to become a member of that society and one of its strong supporters. Early in 1827 he started a brief medical practice, although he thought that, "the city is rather overstocked with physicians who are a quarrelsome set of people, and scowl at a Yankee mightily."

In the eleven consecutive years that Pickering lived in Philadelphia he gave effective support to the natural sciences. He filled the breach that had been made 15 months before his arrival by the departure of Thomas Say (1787-1834), Charles Lesueur (1778-1849), Gerard Troost (1776-1850) and William Maclure (1763-1840) to the New Harmony movement; it is conceivable that the Academy of Natural Sciences might have dissolved but for Pickering's timely arrival. He was rarely absent from a meeting. He served on the zoology committee for ten years, on the botanical committee for eight, on the publication committee for four, and on the library committee for one year. He was librarian for five years and a curator for the next four. He botanized in the New Jersey pine barrens and on the eastern shore of Maryland in 1828, and the next



tor. Pickering was also assisting Audubon and as early as 1831 Audubon referred to him as "my old firm friend."

Because of his accomplishments at the Academy, Pickering's reputation was such that he was immediately selected as chief zoologist for the United States Exploring Expedition of 1838-1842, commanded by Charles Wilkes, U.S.N. The Wilkes Expedition explored the east and west coasts of North and South America and more than 200 islands in the Atlantic and Pacific, confirmed the existence of the antarctic region, spent most of its time in the exploration of the Pacific, and circumnavigated the globe. This was the first attempt of the United States to prove its scientific capability. The expedition sailed from Hampton Roads on August 19, 1838 and returned to Sandy Hook in 1842. During the four-year voyage, Pickering's assigned duty was ichthyology, but he was mainly interested in the geographical distribution of plants and animals; particularly plants, as affected by, or as evidence of,

the operations, movements, and diffusion of the races of man. It is to the collections and investigations of Charles Pickering and James Dwight Dana that the scientific fame of the expedition is principally due — but others in the expedition were William D. Brackenridge, Joseph P. Conthovy, Titian R. Peale, and William Rich.

Throughout the expedition, Pickering made extensive trips into the interiors whenever possible and climbed every feasible peak, proving himself a vigorous, devoted explorer. In the Oregon country, with a small party, he ascended the Columbia River to the neighborhood of Walla Walla and penetrated the Blue Mountains. As one biographical account states, "In the voyage of circumnavigation, he was the soul of industry and a hardy explorer. The published narrative of the commander (Wilkes) shows that he took a part in every fatiguing excursion or perilous ascent. Perhaps the most singular peril (recorded) in the narrative was that in which this light-framed man once found himself in

## GEORGE E. GIFFORD, JR., M.D.

year gave to the Academy 200 specimens of plants he had collected. He was also active in the American Philosophical Society, presenting the previously mentioned paper in October 1827 on "The Geographical Distribution of Plants." For the New Pennsylvania Horticultural Society, he acted as recording secretary from 1830-1837. From October 1836 to October 1837, Thomas Nuttall and Pickering worked side by side at the Academy. Pickering, who was destined to visit some of the same regions that Nuttall had covered, was keenly interested in the thousands of plant and animal specimens which were gradually unpacked, sorted, and arranged. Pickering could not have had a better instruc-



the Peruvian Andes, when he was swooped upon by a condor, evidently minded to carry off the naturalist who was contemplating the magnificent ornithological specimens."

Another passage that relates a grisly experience comes from Pickering's own journal for July 3, 1840:

We had hitherto been so well treated by the Natives, had found them always so obliging, and so 'timid': that many of us began to think that they had been maligned. Some even doubted whether they were really Cannibals; and the question had been seriously discussed at the ward room table the previous evening. It so happened that though we had been nearly two months on these islands, no one could say that he had actually witnessed the fact, or name a person of credit who had. We were on the point of returning, and only adding 'mud to the stream of knowledge.' 'There are none so blind as they that won't see,' but it turned out that these were even forced to see. We were anchored off the village on the island before visited by us, and some one learning that there was a feast on shore, desired evidences of the fact. Presently three or four canoes came about, bringing part of a skull, and several human bones with the flesh adhering. One fellow was seen on deck to pick out the eye, and biting off a piece, chew it with the greatest unco[n]cern, saying that it was 'Venaka.' I was myself below at the time, but afterwards saw some of the bones, pretty well 'gnawed,' and obtained the remnant of the eye . . . which I gave to Mr. Peale.

Pickering's journals of the Wilkes Expedition, now in the manuscript collection of the Academy of Natural Sciences in Philadelphia, are models of record keeping and observation. It would appear, in fact, that he kept rough notes and then later organized his notes into systematic form, rather than simply keeping a narrative journal of each day's events as did most of the other men. Thus, he usually wrote a general summary of the history and people of a given

place, then a day-to-day record of his observation, and finally a detailed and systematically written summary of the natural history of the area, under such headings as vegetation, maritime vegetation, extratropical forms and analogies, review of families, and zoology.

After his return from the Wilkes Expedition, he visited Egypt, Arabia, India, and eastern Africa to verify observations made with the exploring expedition. On his return he settled in Boston and occupied himself in preparing his *Races of Man and Their Geographical Distribution* (1848), which was Volume XI of the Reports of the United States Exploring Expedition. These reports were published at government expense; 19 volumes of the proposed 24 appearing in the years from 1844



**Papuan Man**

to 1874.

Pickering's book on *Races of Man* was published in the antebellum period when there was a great controversy in the scientific community as to whether the races were separate or of one species. The scientific world eagerly awaited the return of the expedition and the publication of the findings. There had been criticism of Pickering's work by the antislavery senator from Ohio, Benjamin Tappan, prior to publication. Tappan was concerned about the possible effect the work might have on universal suffrage.



**Ethiopian Race**

*The Races of Man and Their Geographical Distribution* is a large volume, unwieldy both physically and intellectually. None of the book is completely intelligible and the chapter on "Zoological Deductions" is the most ambiguous and vague of all. Its informed confusion caused the book to be quoted confidently by all parties to the race controversy. By close attention to such phrases as "according to another principle," "the supposition put forth by some writers," "the custom may be noted" — one is able to painfully pick out the meaning. Pickering clearly believed that eleven races of man had been created in two widely separated centers. Unable to persuade Congress to underwrite the unscriptural doctrine of the specific diversity of man, he hid his theories under a bushel of confused verbiage. The book's style had a splendid critic in Dr. Oliver Wendell Holmes. He wrote in 1849, "Is not Pickering's book the oddest collection of fragments that was ever seen. I have been more puzzled to find the law of association by which many of his observations are brought together than the *savans* ever were by the Rosetta Stone." Holmes called the book, "amorphous as fog, unstratified as a dumpling, and heterogeneous as a low priced sausage." In 1850, Pickering was much more ex-





**Negrillo Race**

plicit in his *Enumeration of the Races of Man*, in the *Edinburgh New Philosophical Journal*. A new popular edition was printed in London in 1851, with an introductory essay, "An Analytical Synopsis of the Natural History of Man" by John Hall, M.D. (Illustrations for this article are the engravings and map from this edition). The prefix ended with this summary, "We are all truly satisfied that all the races of man are, as the Gospel clearly states it, 'of one blood' — that the Blackman, Redman, and the White man, are links in the great chain of relationship, and alike children which have descended from one common parent." — a remarkable statement in this pre-Darwinian era.

Pickering did not always need to go to Egypt for interesting study.

In 1850 George R. Gliddon turned up in Boston with two newly acquired mummies, said to be the daughters of Egyptian priests. Gliddon was to give a series of three lectures on the "Art of Mummification Among the Ancient Egyptians" at the Tremont Temple. The climax of his series, which he planned with some dramatic acumen, was the display of a mummy from which Gliddon removed a few of the wrappings at each successive lecture, until at the last of the series, the mummy was unrolled before the audience.

At this moment, local notables of the scientific and medical professions who had been given seats of honor stepped forward in order "to enlighten the audience in their several scientific specialités" as Gliddon put it.

The names of those who volunteered to perform this instructive duty before two thousand at the final lecture was a list of New England's great — Dr. James Jackson, Dr. John Collins Warren, Dr. George Hayward, Dr. Charles T. Jackson, Dr. Augustus Addison Gould, Dr. Henry I. Bowditch, Dr. J.J. Bigelow, and Oliver Wendell Holmes, Dr. Jeffries Wyman, Dr. Louis Agassiz, and Dr. Charles Pickering.

Night after night the audience sat in awed silence as Gliddon removed the shroud. At last he withdrew the



**Papuan Girl**

final remnants and the ancient relic was revealed to the audience. It was rather obviously the body of a man!

A sharp burst of uproarious laughter broke from two thousand well-bred Boston throats. It is recorded that Dr. Bigelow blushed and Professor Agassiz put his hands in his pockets. We do not know what Dr. Pickering did.

Perhaps finding it a safer area of investigation, Pickering went back to writing. He prepared an extensive work on *The Geographical Distribution of Animals and Plants* for the XV volume of the Wilkes Expedi-

tion. During the course of printing, the appropriations by Congress ceased — 100 sumptuous copies for presentation to States and foreign courts had been printed. The authors were allowed to use the type and copperplates for printing as many copies as they required, and would pay for. Under this privilege, Dr. Pickering brought out a small edition of his essay in 1854 and later in 1876 published "On Plants and Animals in the Wild State," which is largely a transcript of his notebooks.

The Proceedings of the American Academy of Natural Sciences contain the following articles by Pickering: Observations on the Egyptian Computation of Time, 1849; On the Egyptian Astronomical Cycle, 1850; On Sulphur Vapor, 1856; On the Coptic Alphabet, 1859; On the Geographical Distribution of Species, 1859 and 1860; The Jewish Calendar, 1864. In 1867 he prepared a paper on the "Gliddon Mummy Case in the Museum of the Smithsonian Institution."

His "great work" was his *Chronology and History of Plants or Man's Record of His Own Existence* to which he had devoted 16 years of work. It was in press at the time of his death. Published at his own cost, it was titled, "Wonder of Learning and of Patience, covering over 1,222 closely printed quarto pages and tracing the migrations and transplantations of plants as shown by existing historic records, from the beginning of the first year of the Egyptian reckoning, with citations in the original language." I just don't believe anyone has ever read it.

As one biographer states, "The range of his general information was very extensive, and whether he was speaking of Feejean pottery, or rare botanical forms found in the mountains of New England, or the character of the alluvial deposits of South American rivers, or the origin of the Esquimaux; whatever he might have to say was interesting and instructive in a high degree." But when I think of Charles Pickering, M.D., my mind runs to condors and cannibals.

# MANUSCRIPTS THEY WOULDN'T LET ME PUBLISH

Paul J. Davis '63

MANUSCRIPTS THAT SHOULD BE FOUND IN A BOTTLE



RECENTLY, and unaccountably, I had manuscripts rejected by three journals within a single week. The journals were, not unexpectedly, J\_\_\_\_\_, S\_\_\_\_\_, and B\_\_\_\_\_.

The editor of J\_\_\_\_\_, as is his wont, began his letter of rejection with an effusive acknowledgment of the pleasure with which his office had received our manuscript, as well as a careful description of the tedious process by which the J\_\_\_\_\_ arrives at its decision to turn down a manuscript. He included comments from several referees as well as his own gratuitous opinion that the paper could be arbitrarily reduced in length by 50 percent without sacrifice of impact or clarity. Referee I, clearly out of his milieu, had written a scholarly indictment of Montessori methods in general, and, as far as we could tell from several readings of his criticisms, had failed to comment at all upon our work (which was entitled "Problems in Isotope Half-Lives in Patients with Hemi-Hypertrophy"). Referee II could not, although he apparently worked at it, conceal his hostility. Clearly, our manuscript had crossed his desk at a peculiarly inopportune time. His antagonism for us was not personal, I sensed, but cut broadly across class lines and several disciplines. It was clear that he at least appreciated our multicompartmental approach and spirited circumlocution. Unfortunately for us, this referee was a lay grammarian who felt moved to deal harshly with every gerund and participle, every colorful adjective and parenthetical expression, upon which we had built our

exposition. Raised on subject-predicate pap as I am sure he was, his hackles rose at our well-intentioned use of such terms as "rap," "cloying," and "electrophoresing."

An assistant editor from B\_\_\_\_\_ sent along with the returned manuscript a personally-typed letter on which he had apparently eaten his lunch shortly before posting. He wrote in his letter, "I am pleased to return your ms. at an early date. It seems this work should be published as part of your reference 8. I am sure a specialty journal will receive your ms. Yours, &c." The manuscript described a fairly unique set of experiments in which we had cross-circulated endolymph from the inner ear of a waltzing mouse into an Alloxan-diabetic panda and produced a brief, but definite, burst of rotatory nystagmus. We were puzzled by the assistant editor's citation of reference 8 since that work (Petard et al., *Comptes Rendu*, 1931) reported a histochemical technic for the demonstration of subtilisin in complex biological systems.

The last rejection, from S\_\_\_\_\_, was the most interesting and at the same time most unsettling. A letter from an associate editor disarmed us with two paragraphs of fervid praise before concluding, "Unfortunately, we do not have the space to publish your manuscript, perceptive and insightful as it is." We were dismayed by this *trompe l'auteur*. Several referees' comments were included. Referee A was ecstatic about the manuscript. He used terms like "ingenious," "elegant," and "pusillanimous" to describe our work. The paper, which dealt with



the partial purification of an alpha<sup>1</sup> antitrypsin from a commercial antiperspirant, was felt by A to deserve immediate publication. Referee B, barely less restrained, used terms like "graceful," "industrious," and "opprobrious" to characterize our work. In the context of these referees' comments, then, we fell into a deep funk when we saw the associate editor's arbitrary decision to reject our manuscript.

These experiences immediately reminded several of us of two important papers. One, of course, is Forscher's beautiful manuscript entitled "Rules for Referees" (*Science* 150:319, 1965), and the other is Ingelfinger's perceptive essay more recently in the same periodical (*Science* 169:831, 1970). Both of these men have put their fingers on the pulse of the problem, but, if you will, from opposite sides of the bed. Forscher, bristling at the anonymous tyranny of referees, wants, like others before him, to have the names of referees made known to the authors in order to clear the air of innuendos, sophistry and mindless suggestions for further experiments which are hallmarks of some referees. Ingelfinger, currently editor of *N*\_\_\_\_\_, sees 85 percent of the manuscripts he receives, rejected. Of those which are accepted, 95 percent are thought by reviewers to require major revisions. Then, to his dismay, an undetermined number of already accepted papers appear in throwaways in some form or other prior to their publication in *N*\_\_\_\_\_.

With these valuable guides at hand, our laboratory settled down to the serious work of reviewing our rejected manuscripts in a dispassionate frame of mind. It was instantly clear in retrospect that the waltzing mouse work should indeed have been published first in a throwaway. We had been premature in submitting this work to B\_\_\_\_\_ where there was a possibility it might be

subjected to critical review. Subsequent repetition of this work, much of it carried out in a hyperbaric chamber for a variety of reasons, has made us consider using streptozotocin by the intravenous route.

On the other hand, we concluded that the isotope work counted for something. Had it not been for an impromptu inspection of the laboratory by the Atomic Energy Commission, several of these experiments might have been carried through to completion. I felt that Referee I, obviously out of his field of interest, had he been forced to sign his name to his review, might have courteously disqualified himself and earned our heartfelt thanks. Referee II was very clearly a cunning expert in isotope contamination who, we felt, was probably working in Petard's own laboratory. His perceptive scientific comments enabled us to rewrite the Interlingua summary in an attractive and tasteful way; however, his haranguing of our prose in the Materials and Methods section we found excessive and, in the last analysis, not constructive.

Finally, the kind of editorial comment we received from S\_\_\_\_\_ raised a new issue. Hesitancy of editors to accept their referees' judgments regarding publishability of manuscripts imperils the whole system of review. Clearly, Referees A and B saw our antitrypsin work as cunning and inevitable. In this situation it seems to make more sense to us to make public the names of the reviewers and to keep the editor anonymous. Regardless of this opinion, however, it should be pointed out that recently a new post-doc from Toledo working in our laboratory reread the antiperspirant manuscript and found the conclusions so outrageous that he had elected to repeat the experiment using aluminum chlorhydrate. The last I saw of him he was walking across the quadrangle, carrying the antiperspirant data under his arm.

REFUSED

# PISHTACOS IN PERU

ROGER I. GLASS '72

THE earthquake in Peru in May 1970 illustrates an unusual paradox in the characters of disaster and relief. Apart from the untold tragedies of dead and homeless, disaster brings with it a short-lived but beautiful, singularly euphoric feeling of man's compassion for man at a time when his humble state in nature is challenged. It brings out a unique spirit of international brotherhood — cooperation coupled with a profoundly unique and individual opportunity for man to communicate his sincere feelings to his fellow man without the limitations of language, politics, geography, class, and race. In a period of days hundreds of millions of people around the world were moved by the tragedy of this earthquake and contributed generously to the relief of the Peruvians. The result of this generosity of millions, however, sometimes turns into an ugly extravaganza where good intentions are transformed into impotent gestures and where the concern and commitment of the moment invariably prove to be hollow.

Success in relief must be judged in terms of the constructive impact that can be made on the victims of the disaster and not in the more traditional American terms of supplies delivered and money spent. The American response to the earthquake disaster in Peru was massive and immediate: in the first month \$25,000,000 were committed to relief; much of this was spent bringing in emergency supplies, surplus foods, blankets, tents, and medical aid. Despite this supply "success," it was somewhat appalling to see how little impact we had in ameliorating conditions in the towns I had the opportunity of visiting. In my short stay in the town of Queracotl, the problems of participating in a major disaster-relief effort were apparent:

the social and cultural background of these Peruvian Indians and the geographic characteristics of the area made it difficult to gather information about the devastation and to match the almost impossible needs of these people with the relief supplies available.

In June, I volunteered to work as translator and medic with a U.S. Army helicopter group involved in earthquake relief in Peru. The earthquake had taken a heavy toll — 50,000 dead and 500,000 homeless — hitting particularly hard in the Callejon de Huaylas valley. Information about the magnitude of the disaster had been slow in reaching Lima because roads and communication lines had been damaged by landslides and rock falls. Now, many countries had committed massive amounts of aid to the relief effort. An airstrip in the valley had been opened; and food, clothing, blankets, tents, and medical supplies were arriving to be distributed throughout the region. The helicopter was proving itself to be the workhorse of the survey and relief operations.

The Callejon de Huaylas is a magnificent valley nestled between the 15,000-foot range of the Cordillera Negra and the 22,000-foot peaks of the white-capped Cordillera Blanca, the highest mountains in South America. The climate in June ranges from a dry, clear, sunny 80 degrees during the day to an almost freezing cold night chilled by the glaciers and the high mountain air. The Callejon has long been a vacation spot for tourists. Its fertile valley, well irrigated by the mountain snows, makes ideal farm land for the Peruvian hacendado. The Indians have remained high in the mountains, isolated from the economic and political currents of the present, still speaking their native

Quechua dialect and farming fields first terraced and irrigated by their Incan forefathers. While some of the children are now learning to speak Spanish, the Indians' only contact with their Spanish neighbors is through sporadic trade. Their fear and distrust of the white man remain strong. Their relative impoverishment, their isolation in the less fertile land high in the mountains, and their exploitation when they work or trade in the cities stands as a constant reminder of this distrust.

The Indians were affected by the earthquake as adversely as the valley dwellers. They had lost their houses, their livestock, their crops. Their personal belongings — blankets, clothes, and food — had been buried under rubble that had been adobe brick homes. They would now have to rebuild shelters, irrigation canals, and aqueducts, take care of their injured, replenish supplies, and return to life as normal. Yet, one might expect that, living more in harmony with their environment and with less dependence on the outside world, they would recover more rapidly in the aftermath of the disaster.

The Indians of this area believe the earthquake is the castigation of the gods, an admonition to the Indian to be humble and respect his place in nature; as such, it has passed down through the culture of these people long indigenous to this earthquake-prone region of the Andes.

AS the relief work began on a grand scale and as goods accumulated in the airbase at Anta, it became evident that few of these supplies would ever reach the highland Indian communities. Roads were opening so that goods airlifted to the base could be easily distributed to the fortunate people living in the neighboring area, and this left Indian communities isolated in the highlands with a meagre portion of the aid that had been donated to them.

On the morning that I volun-



teered, the American helicopter teams were beginning a new strategy for delivering aid. Up to this time, the small "Huey" helicopters were being used to visit and survey all towns in the Huaylas Valley and to deliver goods to those towns whose access to roads had been blocked. The "Hueys" could haul a mere 700 kilograms per trip at relatively slow speeds, and were extremely costly (\$500 per hour) and inefficient in such a large-scale operation. As the stockpiles of goods built up, it became obvious that these small choppers could not work fast enough to keep up with the arrival of supplies.

We tried a new tactic aimed at delivering more goods more efficiently to areas which had not been receiving their fair share of the aid. With helicopters, we could survey towns of 200 people or more above 12,000 feet. These people would most likely be without access to the valley and would need more supplies than a single slow helicopter could deliver on a single visit. After surveying three or four towns, we radioed Lima where large cargo planes, C-130 Hercules, loaded with emergency supplies, could be called on to make parachute drops into the specific towns surveyed. A single C-130 could carry the equivalent of twenty helicopter loads of supplies and drop them with pinpoint accuracy into towns with well-assessed needs. We could multiply the effectiveness of the helicopter, ease the distribution problems at Anta, and make direct deliveries of aid to people who otherwise would be receiving nothing. Finally, after the drop, we returned to the towns, checked on the distribution of the goods, and retrieved the parachutes and harnesses. From the distribution point of view, this seemed to be a practical change that allowed more goods to be delivered directly to people with an accurately evaluated need.

The relief helicopter I was working with landed first in Queracotl. Completely destroyed by the earthquake, Queracotl had been a small town of 150 people perched in the

Andes. After hovering around the 15,000-foot peaks with many sheer rock cliffs dropping spectacularly 5,000 feet to the valley below, we spotted 12 improvised eucalyptus branch huts sitting in complete isolation on a small flat clearing at 13,000 feet. Our pilot had landed here twice before to evacuate several people who had been seriously injured, but he had never really spoken with the people or delivered aid. We circled the soccer field twice, drawing people from the fields and houses out into a dusty, dry, flat dirt area that became the landing field.

As we flew in, a thick brown cloud rose from the soccer field, coating all the bystanders and filling the area with a storm of dust. The motor was shut down, the dust settled, and 70 Indian faces emerged from across the field — charging the helicopter. The dark, weathered complexions and high cheekbones were in marked contrast to the features of the Spanish in the valley. Most of the children were barefoot, and their faces and clothes were all dirty. Our doctor-nurse team walked along the row of huts observing the makeshift interiors, the meagre supply of cooking utensils and blankets, the goats and chickens running in the street, and the crop-filled fields that ran up

**Yungay: Man sitting at the site of his old home, now buried with mud from the alluvian landslide of Mt. Huascaron.**



the mountain to its summit more than 2,000 feet above. I was in charge of making the assessment, of asking those questions we believed suitable for surveying the town, evaluating the responses, and assembling this information for a brief discussion with the rest of the crew. Then we would decide what needs we could meet with an air drop and inform the townspeople of our decision.

My experience in disaster assessment included a grand total of ten days the week before in a different area of Peru. No protocol had been drawn up by the Peruvian or American Emergency Committee; so my questions were those that might come to anyone's mind concerning food, clothing, shelter, health, water, and other problems. Because of my fluency in Spanish, I had been enlisted as a translator, even though the native language of the Peruvian Indians is Quechua. It was the children from ten to 15 years old who answered my questions with some help from their elders.

I stepped down from the helicopter and stared for a moment at the terrain; the mountain rises sharply from the landing field to a peak some 2,500 feet. The town is literally perched like a gutter on the edge of a steep roof; the rock slides on the mountains nearby made the terrain even more formidable. A small crowd formed around me, reminding me of my responsibility: We would stay 15 or 20 minutes, and future assistance depended upon my evaluation.

**A**DDRESSING the group, I asked if there was a person in charge of the town — a leader, chief, mayor, teacher, or priest who might have some reliable information on the area and who could also speak Spanish. Fifteen responses rang forth together: there was a "lieutenant governor" (a local appointed official much like a constable) but he was working high in the hills repairing the canal that brought water from a

spring to the village. The group together would then serve as my "informant."

"How large is the town?" I ventured, seeing only 12 houses on the hill. Fifteen different numbers returned; I wrote down 150.

"How many families live here?" I queried, thinking in terms of family-unit parcels — one tent, six blankets, clothes, and food packaged in a single bundle.

"One," was the unanimous reply. I chuckled to myself, realizing that, in this area, the extended family system made my question inappropriate.

"How many households are there here?"

"Six or seven."

"How has the town been affected by the earthquake?"

Twenty replies came flying. "We have no water," screamed a girl in the front row whose dirty face, hands and clothes seemed to bear out her statement. The canal bringing drinking water from the springs had been destroyed, and the people had few pails to carry water by hand. "We can't even wash." Water canals for irrigation had been disrupted, drying out the crops and making the land dry and dusty and unbearable.

A barefoot boy coaxed on by his mother added, "Our houses have fallen down. We have only these temporary huts which won't protect us from the cold or the rain. And we can't make new bricks without water." His younger sister, proud of her Spanish, chimed in: "When our houses fell down, our belongings were buried — blankets, clothes, toys, even some animals."

A middle-aged woman with two small children holding onto her leg and dress continued: "The roads and paths to the valley have been destroyed, the bridge crossing the river in the valley was washed away and we have been completely isolated since the earthquake."

An older woman burst in urgently, "We have no food. Our crops have been killed by landslides and are drying out for want of water. Many animals were killed by falling

stones. We won't have enough food to last through the rainy season!"

Between comments, which I was scribbling down — and everyone was anxious for me to hear his complaint — I surveyed the landscape. Although the irrigation ditch was not visible, fields of corn and wheat on the hillside seemed intact and green. There were many rocks and boulders in the field but the crops still looked alive. The old houses were a mass of rubble, only a few

fered from injuries from the quake. The seriously injured had been evacuated earlier but often some injured remained whom we were prepared to treat. Many women commented that the quake and subsequent smaller tremors (approximately two per day) had caused them and their children to suffer from "nerves." Could we give them anything? We had been giving aspirin on a very strict schedule in other parts to treat the psychosomatic



**Testing reflexes on Peruvians — long ill with a problem of muscle weakness. Many of the patients we saw had chronic non-earthquake-related difficulties.**

adobe bricks being salvageable.

Although people claimed to need food, they were not visibly starving, malnourished, or dehydrated; chickens, piglets, and goats were wandering down the one path in the village. The houses had been totally destroyed; many belongings had undoubtedly been buried, along with food supplies, blankets, and clothes. Water problems seemed severe. The faces and clothes of everyone were dirty; a line of children carrying assorted tin cans wound a great distance up the hill. Everyone seemed to concur on the water story and the destruction of housing.

In the absence of medical complaints, I asked if anyone still suf-

fered from injuries from the quake. The seriously injured had been evacuated earlier but often some injured remained whom we were prepared to treat. Many women commented that the quake and subsequent smaller tremors (approximately two per day) had caused them and their children to suffer from "nerves." Could we give them anything? We had been giving aspirin on a very strict schedule in other parts to treat the psychosomatic

Several children with minor medical problems were brought forward. One boy, aged seven and very shy, had a superficially infected knee that had been meticulously covered with small pieces of leaves. We cleaned the wound and left a small bottle of peroxide and some cotton, instructing the mother on their use. A girl was brought from a nearby eucalyptus hut; her face was covered with open sores and her tongue was swollen to the size of her fist so that she was unable to speak clearly or eat



properly. Nine years old, she had had Uta (Leishmania) for about five years. We decided to evacuate her although her illness was not related to the earthquake. Her mother let her go unaccompanied, and we left the name of the hospital so that her father could find her. Despite her initial worry and distrust about leaving, our evacuee's tears vanished with several hard candies and the thought of riding in a helicopter.

**O**UR most difficult problem was a 58-year-old woman who had suffered a compound leg fracture during the quake. Having refused evacuation earlier, she now had a severe infection. At 58, she was one of the elders of the village, mother of six, grandmother of 36 and great-grandmother of 12. She had never seen a hospital or a doctor, and her fear and distrust of white Spanish-speaking people were great. Her eldest son and daughter wanted us to evacuate her, realizing that a person living in the mountains who could not walk would have much difficulty surviving. Nonetheless, she had much determination and a strong will; she had heard that hospitals were places where one died, and, if she were going to pass away or remain incapacitated, she wanted to remain with her people. Our promises of free care and a quick return to Queracotl seemed hollow; no amount of discussion could change her mind. She had lived a long time and had heard many such promises in her days: her wisdom and decision were to be respected. We could do no more than clean the bandages on her leg. (Fortunately, several days later when we returned to the village, our friend decided that she would accept our evacuation offer. Her daughter accompanied her.)

A woman, slightly better-dressed than the rest, caught my attention when she mentioned orphans. "Are there any orphans here who need to be evacuated?" I asked. She was holding a child who she claimed was an orphan. I began taking his name

and the name of his father and mother. Many of the people in the crowd agreed the child was an orphan; some seemed less than sure. It turned out that the woman holding the child was the mother, Rosa Munez, who had come to Queracotl with her husband for Carnival in February 1970. Upon arriving, he had abandoned her and their two children. She had spent several months in the town, working and preparing to go back to Lima. The earthquake forced her to abandon her plans. We explained that we did not have space aboard the helicopter for noncritical cases and could not take her and her two children along. She seemed understanding and returned to the group. Afterwards, I wondered if many people might have had a different understanding of the term orphan.

After 25 minutes on the ground, our group huddled together to discuss our findings and plans. The doctor and nurse commented that the improvised shelters were in poor condition; they were undoubtedly very cold at night and would not last until the rainy season arrived. Inside the houses there was little food, few personal belongings, and sometimes only two blankets for a family of eight. Water was a prime problem. Blankets and warm clothing were needed, but there seemed to be no immediate health problem except for our old woman who refused evacuation. Only a few chickens, pigs, and goats were walking around the village; it seemed probable that the town had lost much of its livestock. The irrigation problems, the boulders perched in the terraced fields, and the loss of houses to store the crops presented grave prospects for this year's harvest and the food situation in the coming months.

We then began to think about our relief strategy. For the water problem we had no solutions. No water tubing, buckets, or containers were available among the supplies in Lima. For shelter, all of the relief tents had been distributed in the valley areas near the air base — in clear view of these mountain Indians.



**Hospital Zone: Make-shift shelters and tents in a park adjacent to the hospital which was not destroyed.**

Neither cheap covers — tarpaulins or sheet plastic — to drape over the improved shelters nor iron tools — shovels, picks, or small saws, hammers — were part of our air drop supplies. Food was not an immediate problem in terms of starvation or malnutrition, but would become so in the coming months. American relief money had been spent and supplies had arrived in Lima before any honest assessment had been made. Being only a small part of a colossal \$25,000,000 effort, we could in no way order and deliver those goods that were required in Queracotl. The immediate concern for water containers and tubing, small metal household goods (cooking utensils and knives), small tools (shovels and wheelbarrows), and some elementary building materials, could not be met. Longer-term needs of replenishing livestock reserves or building small store-houses, roads, bridges and housing were not included in our short-range plans; and after our initial relief extravaganza, the funds available for these longer-term projects might

prove too modest. The only supplies we could offer these people that would begin to meet their particular needs were blankets.

Blankets alone would not make a large enough parcel to drop in this town. These people had lost almost everything they had and deserved more help than a few donated blankets. The American aid alone in the first month was equal to \$50 a person. Many people in the valley, who had been much less affected, had received hundreds of dollars worth of goods. Since food supplies were abundant in Lima, we decided to include these in our aid drop — a gesture of sympathy for the people who had been so disastrously affected by the quake, and to whom the society would probably deny further assistance.

We had to go on to other villages; our assessment, with all its shortcomings and frustrations, was complete. I informed the villagers that later a big plane would fly over the town and drop several bundles of blankets and food. I explained that it was important for everyone to keep away from the drop zone until the plane had left because blankets were dropped without a parachute and hence could be very dangerous. I asked that the goods be stored and distributed by the lieutenant governor; we would talk to him when we returned to pick up the parachutes and casings. The people understood and blessed me with profuse thanks. A few women who had claimed that their town had been forgotten had tears in their eyes. I ran to the chopper and it lifted off sharply, over the pad and out over the precipice.

Later that morning, we returned with the C-130 to the area and dropped a smoke bomb to mark the fall zone. To our dismay, this occasioned the interest of every child in the area who ran to the spot, just contrary to our wishes. The C-130 was alerted and left a drop over a second smoke flare. The drop was way off target, missing the plateau and hitting the mountain about 2,000 feet below and two kilometers away from the town. Because the



**Peruvians are fascinated as Huey arrives to assess disaster area.**

drop was so far off-center and would take hours for the people to recover, we did not go back to retrieve the casings and parachute but noted this to be done by the Peruvian Air Force. Parachutes may make good shelters anyway.

After several days of this sort of frustrating aid, we began to rationalize, not unjustly, that a major component of our aid was psychological. We brought help to these isolated areas that was not related to material need. Instead, we let people who had lost everything know that they had not been forgotten. Perhaps this gave them some hope and indirectly helped them begin to rebuild.

In retrospect, the plan, as most relief plans, was absurd. The entire value of Queracotl in terms of capital, tools, and utensils is undoubtedly less than \$500; the total income of the 150 people probably less than \$5,000 per year. Here they were, surviving year round in relative isolation, braving the caprice of nature. And here we were, heralded as the benevolent and humane relief workers, flying in a Huey helicopter at \$500 per hour to visit their town for a total of two and a half hours to make two visits concerning the drop. Across a cultural gap of centuries, we were evaluating the needs of a people with whom we could only marginally communicate in a mini-

scale period of time. Our response was to call in a C-130 at \$2,000 per hour to drop four palates of goods (each valued at approximately \$300), goods that hardly met the needs we could identify across our communications and socio-cultural barrier. Had we given the community our relief money outright or stretched our investment over a year, we probably could have had more influence in improving the lives of these people.

**I**N Indian folklore, *Pishtacos* are white, rich, and educated murderers of the Indians who extract the fat of their victims to lubricate the machines of the modern world and to cure certain diseases. The rich and varied folk-tales of *Pishtacos* help confirm the Indians' long-standing distrust and fear of intruders, of modern technology, and of big organizations. Consequently, acts of assistance, however sincere, are viewed skeptically as attempts to fatten up the victims or gain access to isolated communities. As we left the valley, my head was filled with the thought of the tales about us — the *Pishtacos* of the 1970s dropping blankets and food from the sky and visiting towns with machines that fly like bugs — that would circulate throughout the Callejon de Huaylas.



# THE WILLIAM O. MOSELEY, JR.

## TRAVELLING FELLOWSHIPS

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3. **Clearly plan to devote themselves to careers in academic medicine and the medical sciences.**

*Individuals who have already attained Faculty rank at Harvard or elsewhere will not ordinarily be considered eligible for these awards.*

There is no specific due date for the receipt of applications or for the beginning date of Awards except that the Committee requests that applications not be submitted more than 18 months in advance of the requested beginning date. The Committee will meet once a year in January to review all applications on file. Applicants will be notified of the decision of the Committee by January 31. The Committee may request candidates to present themselves for personal interviews.

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*Application forms may be obtained from, and completed applications should be returned to:*

SECRETARY, COMMITTEE ON FELLOWSHIPS IN THE MEDICAL SCHOOL  
HARVARD MEDICAL SCHOOL  
25 SHATTUCK STREET, BOSTON, MASSACHUSETTS 02115

# EDITORIALS

## NOVEMBER COUNCIL MEETING

The Council of the Alumni Association held its first meeting of the academic 1970-1971 year on Friday and Saturday, November 6 and 7. On Friday afternoon President Sargent Cheever announced his committees to nominate officers and councillors, to be voted on at the next annual meeting in May 1971. Dr. Parsons reported what is presumably a universal experience — a falling off in fund collections during the late winter and spring. He and Dr. Schilling discussed and stressed the importance of giving to individual contributors the privileges of naming the disposition of their gifts instead of having them simply go into an unrestricted alumni fund.

It must be admitted that if several hundred one-dollar gifts were contributed for several hundred separate purposes there might have to be some scratching of heads in the disbursing office.

Further discussion centered around the proposal that class agents be supplemented with regional directors as is already being done in Southern California, Denver, and New York. The pamphlet *An Introduction to Harvard Medical School*, recently prepared by John Eichhorn, Mark Hochberg, and Mark Kelley, copies of which had been distributed to councillors, received much commendation.

As in previous years the committee to nominate councillors was exhorted to spice up the Council with younger men; it was suggested that the Council be enlarged, perhaps by making the presidents of certain classes *ex officio* members.

At the dinner that evening at the Country Club, Dean Ebert stressed the financial problem of the private universities, almost all of which are operating in red ink, not excluding even Harvard despite the Yankee thrift and State Street cunning on which it can draw so liberally. It is

up to their alumni, according to Dr. Ebert, to see that their institutions survive, after they have taken adequate measures to keep themselves off the welfare rolls.

The next morning Dr. Perry Culver, chairman of the Committee on Admissions, elaborated on the rather dismal fiscal situation in respect to many of our students, more and more of whom are appearing already in debt from their college years. A room and bed, \$900 a year ten years ago, is now, on the average, \$1,500 a year; \$70 for books in 1960 has risen to \$150 in 1970; single students could formerly come to medical school for \$3,100. Now, ten years later, the going rate is \$5,437.

Despite the help coming through student loans, to which the Alumni Fund is largely dedicated, and the Franklin Loan Fund, students are again encouraged to work to help themselves along. The maximum amount borrowable has increased from \$4,000 a few years ago to \$10,000 now and federal aid is decreasing.

Peter Williams '74, his class representative on the editorial board of the *Bulletin*, expressed the belief of his class that episodic medical care does not represent the best type of medical care for the future. It may be hoped that the traditional physician-patient relation may persist but on a different basis, free from commercialism. Kim Masters '72 of the Student-Faculty Committee, reported, in reply to a question, that communication between classes is practically nonexistent.

Additional unsettling news must be divulged. It has been known for some weeks that Dr. Parsons, having served for years as director of alumni relations has regretfully resigned his position as of last December 31, in order to devote full-time to his practice and the revision of his textbook, *Gynecology*.

A committee under the chairmanship of Dr. Faulkner was appointed to find a successor to Dr. Parsons and was fortunately able to persuade Dr. Perry Culver to accept the post, which he will take over at the end of the academic year next June. Dr. Culver, a native of Minnesota, graduated from Harvard College in 1937 and from the Medical School in 1941. After an internship in medicine at the Massachusetts General Hospital, he served a four-year stint in the Army, then, for three years, held research fellowships at the Medical School and the Hospital. Presently an associate physician at the Hospital and an assistant clinical professor of medicine at the School, he is also Associate Dean for Admissions and chairman of the Committee on Admissions.

## GREEN Professorship

An editorial in the *Bulletin* approximately two years ago — in a previous winter of perhaps less discontent than succeeding ones — noted with a degree of modest pride the establishment of four endowed Harvard Medical professorships at Boston City Hospital at the time of the Hospital's Centennial celebration in 1964. Those honored were William B. Castle with a professorship of medicine; David William Cheever and David Cheever, for whom a professorship of surgery was named; Frank B. Mallory with a professorship of pathology; and Maxwell Finland, whose name will be forever identified with a chair of clinical pharmacology.

Dr. Finland, now George Richard Minot Professor of Medicine emeritus and president-elect of this Alumni Association, was instrumental in setting on foot still another endowment to honor similarly Charles Montraville Green, one-time professor of obstetrics, and his son, the late Robert Montraville Green, a practitioner of obstetrics and gy-



necology, associate professor of applied anatomy, scholar, poet, teacher of Greek, and editor-in-chief of the *Boston Medical and Surgical Journal* before it became the *New England Journal of Medicine*.

At the time of the previous editorial in the *Bulletin*, the required endowment of \$600,000 was more than half pledged. As of now, the Green Fund has grown to over two-thirds of its goal, but the nation has fallen on parlous times and as academic needs increase the means of

satisfying them are harder to come by.

Meanwhile, the Obstetrics-Gynecology building at the Hospital is being completely remodeled and modernized to offer the best quality of medical care and service to the patients and improved opportunities for teaching and research. It stands ready to receive the new professor when the Medical School's benefactors are ready to complete the endowment necessary to support his professorial chair.

## REGARDING ANATOMICAL MATERIAL

Despite advances in technical knowledge and the widening scope of medicine as a social institution, anatomy — a knowledge of the human body both gross and microscopic — remains the basis of the study of medicine. There is no further need, at least at present, to recapitulate the long history of the procurement of human bodies for dissection, or the achievements of Dr. Benjamin Spector, for 14 years co-

ordinator of anatomical material for the three medical schools of the Commonwealth to which a fourth has this year been added. His last two annual reports have been commented on in these columns.

It is still of interest each year to know how his work is progressing and how its results are improving as the diminishing number of unclaimed bodies obtained from the various state institutions is being

more than offset by the increasing number of those donated by their previous inhabitants or their heirs. Thus, from 1956 to 1970 the unclaimed number has dropped from 132 to 50, and the number of those donated has climbed from 10 to 164.

The requirements of each school on the basis of student population has been computerized as 40 for Boston University, 85 each for Harvard and Tufts, and five for the University of Massachusetts. In the year presently reported 50 unclaimed bodies have been received as compared with 59 in the previous year, and 164 have been donated as compared with last year's 149 — a net gain of six. Since donated bodies must go to the school designated, when a designation has been made, and Harvard seems to enjoy a special charisma in this respect, Harvard has been allotted none of the unclaimed bodies but has received a high proportion of those donated.

"O grave," according to I Corinthians 15, "where is thy victory?"

Dr. Spector, formerly professor of anatomy at Tufts University Medical School, now has his headquarters in the Harvard Medical School and will gladly supply further information on the subject, especially to anyone who is eager to help increase the body count.

	B.U.	Harvard	Tufts	U.Mass.	Total
Unclaimed bodies	12	0	33	5	50
Donated bodies	24	103	35	2	164
Total	36	103	68	7	214

# ALONG THE PERIMETER

## JOHN C. SNYDER RESIGNS DEANSHIP OF HSPH

John C. Snyder '35 has announced that he will resign on June 30, 1971 as Dean of the Faculty of Public Health at Harvard, to devote the five years prior to his retirement from the University to scholarly pursuits in population problems and the prevention of infectious disease.

Dr. Snyder, who has led the Faculty of Public Health since 1954, was the first Dean to be appointed by President Nathan M. Pusey. Dean Snyder's resignation was accepted by the President and Fellows

of Harvard at their final meeting of the 1970 calendar year. Dr. Snyder will continue as a professor at the School. Currently he is the Henry Pickering Walcott Professor of Public Health and head of the department of population sciences.

In commenting on his letter of resignation to the President and Fellows in which he expressed his desire to relinquish the administrative responsibilities in the Faculty of Public Health, Dr. Snyder said:



John C. Snyder '35

For more than a decade I have been exhorting the profession of public health to focus on the dangers inherent in overpopulation, one of the world's most serious problems. I have decided to accept the challenge myself and devote the five years remaining until my retirement from academic life to teaching and research on population problems, including the closely related and equally challenging problems of preventing infectious diseases. Many individuals have recognized, but relatively few have acted positively on the premise that one key to acceptance of fertility control, especially in developing regions of the world, is assurance that limited numbers of children born to a couple will survive to productive maturity. There is little basis for such assurance in a great part of the world where infectious diseases take high toll in infant mortality. With this in mind, I hope that my background as a physician and microbiologist, with the broad perspective gained as a dean of a graduate school of public health, will be useful in the concentrated effort which I look forward to undertaking.

Under Dr. Snyder's leadership the academic and financial growth of the Harvard School of Public Health has been significant.

When he became Dean in 1954, there were nine professors with

tenure, now there are 25. During his 16 years, the faculty has more than doubled in size. The number of endowed professorships has risen from one in 1954, to 12 in 1970.

The endowment of the HSPH under Dr. Snyder's administration quadrupled, going from \$5,048,833 in 1954 to \$24,394,099 in 1970, while the annual budget increased from \$1,350,958 in 1954 to a current level of \$8,537,874.

The growth in endowment support was also reflected in the establishment of two new academic departments in the School; demography and human ecology in 1962 (now called population sciences) and behavioral sciences in 1965.

Additionally, the School, which was acutely pinched by space requirements in 1954, has, during Dr. Snyder's tenure, raised \$25,729,000 in building funds including the funds necessary for the renovation of a Park Drive apartment complex into the Henry Lee Shattuck International House for students, particularly those from foreign nations. Two new research buildings totaling 245,000 square feet of floor space were erected. A third building, an educational facilities structure (which will total 150,000 square feet) is currently under construction.

## 29 CHOSEN TO REVIEW GOVERNANCE: ALBERT H. COONS NAMED CHAIRMAN

Last April the *Bulletin* reported on the proposals for forming a Harvard Medical School Committee on Governance. That committee has been formed and consists of 16 elected members from the Faculty of Medicine and 13 other members, either elected or designated by students or other groups.

Albert H. Coons '37, professor of bacteriology and immunology at HMS, is chairman of the committee. Faculty members elected to membership, by category, are:

*Harvard School of Dental Medicine* — Dr. I. Leon Dogon, junior faculty; Dr. Walter C. Guralnick, senior faculty.

*Senior clinical faculty, full time* —

Dr. J. Hartwell Harrison, Dr. John Hedley-Whyte, Dr. Stephen M. Krane.

*Senior clinical faculty, part time* — Claude E. Welch '32.

*Junior clinical faculty, full and part time* — Dr. Frank F. Davidoff, Dr. Rita M. Kelley, Peter Reich '56.

*Basic science tenure faculty* — Albert H. Coons '37 and Don W. Fawcett '42 (elected by the full faculty); Dr. Elizabeth D. Hay and Dr. Edmund C. C. Lin (elected by the basic science faculty).

Members of the committee in other categories are:

*Harvard Medical School students* (elected by class) — Roger Fleischman '74, Doug Yock '73, Rex Cow-

dry '72, Emmanuel Cassimatis '71.

*Harvard School of Dental Medicine* (one student from the student body) — Jeffrey Hoover '73.

*Postdoctoral student* (named by the Student-Faculty Committee) — Ken Olden, research fellow in physiology.

*House Officer* (named by the Student-Faculty Committee) — Bart Saxbe '67, resident, Peter Bent Brigham Hospital.

*Graduate student* (named by Student-Faculty Committee) — Colleen Meier.

*Harvard Medical School Alumni* (to be the president of the Alumni Council) — F. Sargent Cheever '36.

*Visiting Committee of the Board of Overseers to the Medical School and School of Dental Medicine* (to be the chairman of the Visiting Committee) — Calvin H. Plimpton '43A.

*Harvard Medical School Administration* (named by the Dean) — Associate Dean Henry C. Meadow.

*Member-at-Large* (nominated by the Center for Community Health and Medical Care) — Dr. Robert S. Weiss.

*Student-at-Large* (named by the Student-Faculty Committee) — (To be named).

The function of the committee is to review the existing mechanism of governance at HMS in terms of function, efficiency, representation, and organization; to gather and organize the knowledge, opinions, aspirations, and judgments of widely representative groups of members of the HMS community; and to recommend any changes in the existing governance it deems necessary.

## ELLIS LECTURE

James J. Leonard, M.D., professor of medicine and acting chairman of the department of medicine at the University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania, was the Sixth Laurence B. Ellis Lecturer at the Harvard Medical Unit at the Boston City Hospital. The Lectureship was established by students, associates,



and friends of Dr. Ellis as a token of their gratitude, esteem, and affection, and in recognition of his many significant contributions to cardiology, and particularly for his devotion to teaching.

After paying tribute to Larry Ellis and reminiscing about his year as resident at Boston City Hospital, Dr. Leonard reviewed past thinking and research on the transport function of the atria. Previous studies of cardiac output in patients with atrial fibrillation before and after cardioversion have yielded conflicting results.

Dr. Leonard devised an ingenious method of measuring stroke volume in patients with stenosis of the aortic or mitral valve, using the stenotic valve as a flow meter. The valve area having been determined in the usual manner, by means of the Gorlin formula, beat by beat stroke volume could then be calculated from the pressure gradient across the stenotic valve. By means of pacing patients into atrio-ventricular dissociation, he then showed that as the PR interval shortened, stroke volume increased to a maximum at about 0.20 seconds, and then decreased again. The maximal contribution of the atrium to stroke volume amounted to 25 per cent. A similar effect upon

stroke work was demonstrated, the atrial contribution being even greater. The atrium thus acts as a booster pump.

Inasmuch as in this experimental design the atrium continues to beat, the question arose as to whether impairment of the atrium's ability to store energy by being distended in diastole (reservoir function) might not have accounted for at least part of these results. Therefore, two other interventions were used to test the possible contribution of the reservoir function to atrial systole: synchronous atrial and ventricular pacing and induced dropped atrial beats. Under these circumstances, the reservoir function was maintained, and yet stroke volume decreased. It could thus be concluded that it is the booster pump function that accounts for the atrial contribution to stroke volume. Why do some patients after cardioversion fail to increase cardiac output for several days? Electrical systole returns before mechanical systole.

Dr. Leonard concluded that the atrial contribution to cardiac function is significant, and that restitution of normal atrial function in patients with atrial arrhythmia is a physiologically and clinically worthy objective.

## WELCH NAMED INGRAHAM PROFESSOR

W. Keasley Welch, M.D., former professor of neurosurgery at the University of Colorado and a leading investigator of the cerebrospinal fluid, has been named the Ingraham Professor of Neurosurgery at Harvard Medical School.

He has also been appointed neurosurgeon-in-chief at the Children's Hospital Medical Center.

During 1969-70, while on sabbatical leave from the University of Colorado, Dr. Welch worked in the laboratory of Professor Hugh Davison in University College, London, where he developed and validated a mathematical model for predicting the distribution of material in the fluids of the central nervous system.

Dr. Welch received the M.D. degree from Yale University School of

Medicine in 1943 and the M.Sc. degree from McGill University in 1947. He served as head of the Division of Neurosurgery at the University of Colorado. The Division has produced a significant number of academically oriented young neurosurgeons.

Among his professional memberships, Dr. Welch lists the Neurological Society of America, Harvey Cushing Society, and the American Academy of Neurology.

The Ingraham Chair was established by Harvard University in 1969 with funds contributed to the Children's Hospital Medical Center by an anonymous group of donors in honor of the late Franc D. Ingraham '25, a pioneer in the development of pediatric neurosurgery.

## GENETIC ALTERATION: PROMISE NOT THREAT

Bernard D. Davis '40, Adele Lehman Professor of Bacterial Physiology at HMS, in a recent issue of *Science* magazine, stressed the importance of eliminating the fallacies that surround genetic manipulation. Expanding on a theme originally developed for presentation at the 1969 meeting of the American Association of Science in Boston, Dr. Davis emphasized that the potential benefits of genetic alteration heavily outweigh what he terms "overly dramatized" exaggerations of the dangers on the part of some scientists.

Dr. Davis cited two deterrents preventing genetic control over human personality traits and behavior. The first deterrent lies in the fact that a person's intelligence, temperament and physical structure are polygenic rather than monogenic in character. The polygenic traits depend on multiple genes and vary continuously; while monogenic traits such as eye color and various hereditary diseases result from genes that individually exert an all-or-none control over the trait. Behavior depends largely on differences in the wiring diagrams of the individual brain. Consequently, it is highly unlikely that added genes could influence the wiring diagram unless put into the germ cell before development.

Genetic alteration, Dr. Davis pointed out, could be of immense value to man, both medically and non-medically. For instance, there is the possibility of a "one-shot cure" of such hereditary diseases as diabetes, hemophilia, or sickle-cell anemia. In addition, there are long standing agricultural benefits: "increased production and improved quality of livestock and crops, steadier production based on resistance to infections, vastly increased yields in antibiotic and other industrial fermentations . . ."

In conclusion, Dr. Davis said that genetics could be used "unwisely

and even malevolently," but such potential abuses cannot be prevented by curtailing genetic research.

"For one thing we already have on hand a powerful tool (selective breeding) that could be used to influence the human gene pool, and this technique could be used as wisely or as unwisely as any future additional techniques. Moreover, since the greatest fear is that some tyrant might use genetic tools to regulate behavior, and especially to depress human potential, it is important to note that we already have on hand pharmacological, surgical, nutritional, and psychological methods that could generate parallel problems much sooner. Clearly, we shall have to struggle, in a crowded and unsettled world, to prevent such a hor-

rifying misuse of science, and to preserve and promote the ideal of universal human dignity. If we succeed in developing suitable controls we can expect to apply them to any later developments in genetics. If we fail — as we may — limitations on the progress of genetics will not help."

## 25TH PRESIDENT

**After 11 months of searching, Derek C. Bok, 40, Dean of the Law School since 1968, was elected President of Harvard University. Dean Bok, an authority on labor law and anti-trust law, and a member of the faculty of the John F. Kennedy School of Government, will take office this July 1.**



**Derek C. Bok**

## PROMOTIONS AND APPOINTMENTS

### PROFESSOR

John P. Merrill '42: medicine  
Sven Paulin: radiology  
Herman D. Suit: radiation therapy

### ASSOCIATE PROFESSOR

Donald G. Comb: biological chemistry  
I. Leon Dogon: operative dentistry  
Jerome Gross: medicine  
Hermann Lisco: anatomy  
Elio Raviola: anatomy  
John Shillito, Jr. '52: surgery at The Children's Hospital  
Gene M. Smith: psychology in anesthesia  
Philip R. Steinmetz: medicine

### ASSOCIATE CLINICAL PROFESSOR

Melvin I. Cohen: orthodontics  
Harry L. Mueller '34: pediatrics

### ASSISTANT PROFESSOR

Eliot L. Berson '62: ophthalmology  
Winifred W. Boos: biological chemistry  
Burnell R. Brown, Jr.: anesthesia at Peter Bent Brigham Hospital  
Robert C. Buxbaum: medicine at PBBH  
John J. Collins, Jr.: surgery at PBBH  
Harvey R. Colton: pediatrics  
Leonard J. Deftos: medicine  
Samuel Gilman '31: anesthesia at Beth Israel Hospital  
Richard J. Grand: pediatrics  
Constantine L. Hampers: medicine at PBBH  
Elvin Harper: biological chemistry in the department of medicine  
Alice S-H. Huang: bacteriology and immunology

Burton F. Jaffe: otolaryngology at BIH  
M. Edward Keenan: pediatrics at Massachusetts General Hospital  
Edwin H. Kolodny: neurology  
Harvey L. Levy: neurology at MGH  
J. Drennan Lowell '46: orthopedic surgery at PBBH  
Harold L. May '51: surgery at PBBH  
Aubrey Milunsky: pediatrics  
Vivian E-an Shih: neurology at MGH  
Warner V. Slack: medicine  
Frank E. Speizer: medicine  
David A. Swann: biological chemistry in the department of surgery  
Sybil W. Woo: anesthesia at BIH

### ASSISTANT CLINICAL PROFESSOR

Boris P. Bushueff '43B: radiology  
Vincent DeAngelis: orthodontics  
Herman DeWilde: operative dentistry  
William F. Flynn: surgery  
Dorothea E. W. Hellman '57: medicine  
Alvin A. Krakow: endodontic dentistry  
Alan D. Perlmutter '56: surgery  
Eugene E. Record '34: orthopedic surgery  
Edward J. Riseborough: orthopedic surgery

### PRINCIPAL ASSOCIATE

Mary J. Spiro: medicine (biochemistry)

### PRINCIPAL RESEARCH ASSOCIATE

Gail A. P. Bruns: pediatrics (cellular biology)

### CLINICAL ASSOCIATE

Elliott V. Miller '58: anesthesia



# book REVIEWS

**Pioneer in Modern Medicine: David Linn Edsall of Harvard** by Joseph C. Aub '14 and Ruth K. Hapgood. Foreword by Paul Dudley White '11. 373 pages, illustrated. Boston: Harvard Medical Alumni Association, 1970. \$12.00.

As so well stated by Dr. White in the Foreword:

This book presents in considerable detail not only the background and life of David Edsall but the history of the struggles of the faculties of the medical schools of three universities: Pennsylvania in Philadelphia, Washington in St. Louis and Harvard in Boston. It was an exciting time of change and it was natural for these pioneers in their impatience of ten to disagree with each other. Dr. Aub and Mrs. Hapgood have done an important service in presenting the complexities of the life of our hero, David Edsall, and we are grateful.

Dr. Aub's approach to the recording of those creative years is inevitably autobiographical because of his intimate academic association with Dr. Edsall. The result makes him truly Boswellian in his contribution to this story: a labor of love uniquely his own!

Edsall was indeed a giant figure; intellectually, physically, and in moral forcefulness during the years he dominated the scene, so aptly characterized by Simon and James Flexner as the "heroic age of American medicine." Such strong qualities of leadership were essential during the revolutionary upheavals in medicine, beginning as early as the 1880s and extending well into the decades after 1900.

As this tale of tremendous change in the course of medical education unfolds, it becomes increasingly clear that Edsall was distinctly a home-bred, indigenous phenomenon,

with his educational roots fundamentally in New Jersey and Philadelphia. That distinction became increasingly important, in contrast to the origin of the concepts generated at Johns Hopkins University under the equally inspired leadership of Billings, Welch, Osler, and Halsted, derived chiefly from German models. There, in pursuit of the highest excellence of teaching, research, and scientific standards of medical care, *within* the medical school and its own fully controlled hospital, in a completely new venture, the image of the "ivory tower" of academic medicine emerged.

By contrast, over the same period, Edsall was progressing largely from a broad base of American experience and widening interest in the neglected laboratory sciences related to clinical medicine at the William Pepper Laboratory. Chemical studies of the urine and gastric juice

resulted in the publication of a paper with Dr. Pepper in 1887, the first of 106 contributions to the advancement of medicine during his lifetime. For seven years he broadened his acquaintance with developments in pathology, biochemistry, and physiology, in English, French, and German medical literature for the *American Year Book of Medicine and Surgery*.

Significantly his interests extended outside of hospital and office practice. During his internship in Pittsburgh he first came in contact with the diseases of occupation that led to lifelong leadership in the research and prevention of diseases peculiar to industrial workers. In Philadelphia as a district physician, he acquired a keen and sympathetic understanding of the relationship of poverty to illness. A wide knowledge of the ailments of children was acquired, as in those years the distinctions between internal medicine and pediatrics were not clearly defined. Both William Osler and David Edsall served as presidents of the American Pediatric Society. In all of these activities, the advantages

**James M. Faulkner '24 (1) presents first edition to author Aub.**



of an international perspective were not ignored. Later Edsall considered the opportunities for studies in Austrian and English centers "... perhaps the most important single thing in my development."

During the Philadelphia years, interest in chemical research led naturally into its clinical applications in reform of the *Pharmacopeia*, and his promotion to the rank of professor of therapeutics and pharmacology at the University of Pennsylvania. Memberships in the Association of American Physicians, the American Society of Clinical Investigation (the "Young Turks"), founding committee member of the Archives of Internal Medicine, and especially of the Interurban Clinical Club brought Edsall into inspiring contacts with the outstanding figures in Baltimore, Boston, New York, and Philadelphia medicine. His marriage to Margaret Tileston of Boston in 1899, the mother of his three sons, John, Richard, and Geoffrey, widened his circle of friendships in the "Hub". Her sudden death in 1912, soon after beginning his Boston career, was the great tragedy of his life.

The great turning point in his professional career came with conflicts and frustrations, just when he appeared to have reached the summits of attainment: first as professor of clinical medicine at Penn, and then for a brief interval as professor of preventive medicine at Washington University in St. Louis, where he made unsuccessful attempts to reorganize and modernize both laboratory and clinical teaching. He learned much from those experiences, and a happy outcome was the heart-warming welcome and steadfast support he received from Drs. Frederick C. Shattuck (whom he succeeded) and Richard C. Cabot (the other leading candidate for the post) at the Massachusetts General Hospital. Edsall became Jackson Professor of Clinical Medicine in 1912 and began 23 years of ultimate achievements. At the MGH he was the first laboratory-trained clinician and a new phenomenon on the Bos-

ton scene — he was the first of what was to be the Harvard version of "geographic full-time." He became Dean of the Medical School in 1918 and of the School of Public Health in 1922; he led both institutions far along the road of achievement among the leading centers of the country.

Dr. Edsall encouraged salaried clinical professors to have private practice privileges in a variety of affiliated hospitals to accommodate larger enrollments and extend academic influence. This brought him into conflict with Abraham Flexner, the doctrinaire "apostle" of *complete* full time coupled with medical school control of *one* university hospital. In spite of Flexner's and Welch's "inside track" with the General Education Board and the Rockefeller Foundation, and in spite of Flexner's opposition to Harvard's concepts of academic excellence, Edsall was successful in obtaining grants from the Rockefeller Foundation to strengthen psychiatry, neurology, neuropathology, and obstetrics and gynecology, as well as a gift of \$1,785,000 to place the School of Public Health on a degree-granting basis. Ironically, Edsall was caught in a dilemma between Harvey Cushing's bitter opposition to attempts to convert the Peter Bent Brigham Hospital to the role of Harvard's University hospital, with inclusion of any full-time concept, and Flexner's conviction that Rockefeller largess should be diverted elsewhere unless the "Brigham" was brought into line!

The De Lamar bequest received soon after Edsall's arrival was his salvation, as it soon grew into six million dollars in value, and was applied skillfully on a rotating basis among departments as needed. Wise selection of young talent — Means (his successor as Jackson Professor), White, Aub, Cobb, C.K. Drinker, Gamble, Palmer, Rackemann, Binger, Castle, Blumgart, and others for further training — assured the future greatness of the faculty. The appointment of Dr. Alice Hamilton as assistant professor of industrial

medicine was another Edsall triumph.

Now, in 1970, with the appearance of the Special Report and Recommendations of The Carnegie Commission on Higher Education, which recommended the extension of both university health centers and university affiliated health education centers to all states of the Union, and also recommended greatly increased production of medical personnel in all categories to meet the challenge of providing good medical care *as a right* to all members of the population, it is evident that Edsall's vision of community-wide responsibility of medical schools and their teaching affiliates makes him a true prophet of the future!

JEAN A. CURRAN '21

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**The Road to Medical Enlightenment 1650-1695** by Lester S. King '32. New York: American Elsevier Publishing Company, Inc. 204 pages. \$11.50.

This slender volume of 204 pages is a scholarly and fascinating contribution to the history of medical ideology. Dr. Lester S. King describes the conflicting currents of medical theories in the latter part of the 17th century that led to the erosion of Galenism after it had held sway for 13 centuries. Its remarkable, rapid decline and fall are described with great clarity and insight.

The intellectual history of the period, 1650-1695, that led to the period of enlightenment in the following century is portrayed by key figures who represent salient aspects of the swiftly moving currents of those times. To indicate the Galenical point of view of health and disease, Dr. King chose the writings of Lazar Riverius to exemplify the ancients. The interaction between his intellectual conformity and the rebellious assault of others, such as Van Helmont, led toward the 18th century period of enlightenment. Robert Boyle, though not a physician, also departed from the teachings of Aristotle. His concern with the philo-



sophical basis of medicine led to important changes in both medical theory and practice. Paradoxically, he had little effect on the trend of chemical explanations of medical phenomena. This trend, however, is represented by Franciscus Sylvius, an acknowledged rationalist who sought a basis for medicine in chemistry rather than metaphysics. Similarly, Sydenham, spurning metaphysics, claimed that his theories derived directly and solely from what was observable. His characterization as the English Hippocrates reflected the esteem in which he was held.

Finally, Dr. King deals at length with Friederich Hoffmann whose *Fundamenta Medicinae*, published in 1695, is a superb example of the

new medicine. It heralded the dawn of true enlightenment that reached fruition in the 18th century. The *Fundamenta Medicinae*, Dr. King states, was the precursor of Boerhaave's more famous *Institutiones*, and was a logical step in the process whereby the vigorous intellectual ferment of the late 17th century became channeled into medical teaching and medical practice.

This scholarly treatise will be enjoyed by all those interested in the history of medicine. Particularly pleasing are the biographical descriptions of salient figures, such as Sydenham and Friederich Hoffmann, their intellectual qualities and medical ideology.

HERRMAN L. BLUMGART '21

I hope that with "tongue in cheek" he is condemning this murderous atrocity.

The portion of the editorial that purportedly works out Dr. Reid's attempt at "mass abortion" would do credit to Adolph Eichmann.

Congratulations to American medicine — we have gone all the way — we've equaled mass murder a la Naziism 1943. What next — euthanasia?

PAUL W. BRAUNSTEIN '47

The above letters were forwarded to Dr. Richardson who offers the following comment:

Doctors like to talk about individualizing their treatment; indeed this is the basis of medicine as long as it remains a one-to-one transaction. Unfortunately the habit of individualization atrophies the capacity for generalization. One D&C for urgent reasons is easily understood, but the concept that there could be as many as 1,000,000 urgent reasons across our broad land is horrifying. The doctor must imagine that Mrs. America (or Miss America) is a little bit pregnant and getting more so, and that his patient is the emotionally unstable 45-year-old wife of a physician, or his hitherto sexually unawakened 15-year-old daughter. Would this doctor ever counsel an abortion (all right, call it an "interruption")? If so, we know what he is; it only remains to determine his price.

It would be preferable if we could pose the problem in terms of our malnourished poor and the children who are not only unwanted but also without parents. Let us focus our compassion on these, who will never enter our waiting rooms, who will never be the subject of our individualization! Let us contemplate the facts of population growth, as best we understand them! Let us be horrified by the lack of a suitable solution, and let us respond by *trying to do something about it*. Those who reject abortion on moral grounds

## LETTERS

### ABORTION ISSUE REMAINS ON TRIAL

To the Editor:

As a former exchange resident to the Boston Lying-in Hospital, I am afraid that your editorial on abortion may create a false impression among Harvard medical students. The impression may exist that such Harvard concepts of obstetrics are universally held, and that choosing a career in obstetrics is a preparation for a life of attempts at social problem solving with a suction bottle or curettes in American motels.

I would like to assure such students that training opportunities exist at other universities where, in view of Harvey's work on circulation and modern genetics, the fetus is no longer held to be simply a maternal organ. At such institutions it is thought medically, ethically, and scientifically sounder to enhance his welfare in hospitals rather than dispose of him in motels. Such students need not be afraid that they would be scientifically out of date. The Society for Gynecologic Investigation,

of which I am a past president, and the Perinatal Research Society, of which I am currently the president, hold long and interesting sessions on fetal physiology, biochemistry, and genetics. Many of the studies reported are financed by the National Institute of Child Health and Human Development which was established by a Harvard College alumnus for the specific purpose of enhancing the welfare of children from conception onwards. Students of such frame of mind are welcome to apply for their training at Georgetown University.

ANDRE E. HELLEGERS, M.D.  
Professor of Obstetrics  
and Gynecology  
Georgetown University Hospital

To the Editor:

I must say I can't be sure of Dr. Richardson's stand on abortion in the Sept-Oct issue of the *Bulletin*.

are no less obligated, indeed they are more so, if "morality" is not to be exalted above charity.

What will we do if contraception fails to become significantly more effective than it is now? If such proves to be the case, I think we would, and should, permit abortion under certain circumstances and set about carrying it out in the safest possible way. Indeed, this is already being done in some parts of this country.

I do not like to perform or to recommend abortions myself, but I have been forced to recognize that there are times when it is the best solution for the mother, for society at large, and perhaps even for the unborn child. I hope and pray that some better solution will present itself; of course, I would like to believe that the prostaglandins might really do the job.

GEORGE S. RICHARDSON '46

P.S. The following reference is for the scientifically inclined: "Birth Control after 1984" by Carl Djerassi. Science, Sept. 4, 1970.

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To the Editor:

I found the communications on abortion by Reid, Asher, and Richardson somewhere between ludicrous and frightful.

Dr. Asher got close to the central point but finally dodged it: he told us he did not think the early fetus was a child, but he didn't tell us when it becomes a child.

Of course a single sperm does not contain a *homunculus* — but a fertilized egg has all the DNA it needs to become a little man or woman. On scientific grounds, the early fetus is alive.

The burden lies on Dr. Asher, I believe, to offer convincing proof to the contrary. Otherwise his position is pretty hard to tell from that of others who have favored suppression of individual rights on behalf of a certain definition of the general

good — advocates of slavery, war, capital punishment, genocide in the gas chamber, and so on.

It would be vastly comforting if abortion could indeed be sharply separated from infanticide. For myself, I find it incompatible with the physician's responsibility to preserve life, a very doubtful means of achieving population control, and arguably as likely to produce social damage as social good.

FREDERICK C. GOETZ '46

The above letter was forwarded to Dr. Asher who offers the following comment.

Dr. Goetz quite rightly points out that I did not tell the reader when the fetus "becomes a child." I did not do so, because I do not know.

I agree with Dr. Goetz's view that "on scientific grounds the early fetus is alive." I do not therefore feel that the burden is on me to offer convincing proof to the contrary. I would hope that he would agree with me that sperm are alive and that ova are alive. Why he is so much more protective of feeble fetuses than he is of unsuspecting sperm or innocent ova, may be worth some reflection on his part.

I do not, however, agree with Dr. Goetz when he lumps me with "advocates of slavery, war, capital punishment and genocide." If a fetus were equivalent to a child, abortion would indeed be a form of genocide

— the systematic extermination of a particular class of beings: unwanted fetuses. But fetuses are not infants. If they were we would not authorize their elimination merely because their conception resulted from rape. I would very much like to comfort Dr. Goetz and many others by pinpointing for him the precise moment when fetus becomes child but alas I can not. Each woman and each doctor must decide that issue for themselves.

What I would ask of Dr. Goetz and others who feel as he does, is that we finally give up the issue of when life "begins" as unresolvable, and at last, move on to the present day realities: 1) Abortion is, was, and will be with us. 2) Many women have the overwhelming need to bear children only when they want to. 3) Newborn children have a reasonable right to be desired by the people bearing them.

Finally, let me state clearly that I find abortion in harmony with the preservation of life (the woman's life), that abortion has been until now the only method of population control to have had a measurable demographic result (Japan and Eastern Europe), and that abortion is likely to produce much more "social good" if done legally by physicians than if done illegally by untrained personnel.

In short, let us agree to disagree but also support each other's right to speak and act as each sees fit.

JOHN D. ASHER '67

## READERS ADAMANT IN DEFENSE OF BURACK

To the Editor:

*The New Handbook of Prescription Drugs* by Richard Burack, M.D., reviewed in the Sept.-Oct. *Bulletin*, was given such a bitter and vitriolic lashing that it could be by someone whose Achilles tendon has been hard hit by the truth of the book. The comments presented in this review have in numerous instances been essentially lifted from a variety of pharmaceutical advertisements that adorn and disgrace our

medical journals — this in an effort to downgrade a truly remarkable book.

It is not necessary to agree with everything that Dr. Burack says. However, he has presented in a most absorbing fashion the other side of the avalanche of brand-name drugs that inundate us. Dr. Burack has disturbed our conventional thinking about drugs and prescription writing with great clarity and intellectual integrity. He has stirred the imagination and attitudes of our rising gen-



eration of physicians toward the irrelevancies of modern teaching in pharmacology. Even some of the older generation of doctors has become alerted by his writings to a totally new hard look at the whole drug industry, their products, and their subtle control of physician education, as well as their habits of prescription writing.

The control of the medical profession by the pharmaceutical industry is indeed in a sorry state of chaos. Former Senator Estes Kefauver ten years ago was the first to detect this and lay it bare, and Senator Gaylord Nelson's committee today is still investigating this whole problem in depth. Dr. Burack is to be complimented on his fight for better patient care by more knowledgeable prescription writing. A clear understanding of what this problem is all about will come with careful study of his introduction to *The New Handbook of Prescription Drugs*. There his scholarly approach to the use of drugs for the best practice and for the greatest safety of medicine is clearly formalized.

THEODORE L. BADGER '26

To the Editor:

I was astonished at Dr. Hassan's review of Dr. Burack's *The New Handbook of Prescription Drugs*.

1. Dr. Hassan interprets the following statement, "No generic company with a seriously bad record has been included — (page 284)" to mean that generic companies "have bad records but . . . not bad enough to eliminate them from his listing." Evidence currently available shows that the number of recalls by the FDA for large, brand-name distributors is twice that for the smaller, generic distributors even when adjusted for product volume.

2. Dr. Hassan's plea for "bioavailability" standards for drugs has a false ring. Does Dr. Hassan believe that generic products are less likely to meet such standards when compared with brand-name products? There is no evidence to suggest this. Furthermore, when such standards

were recently suggested in federal legislation, they were violently opposed by the Pharmaceutical Manufacturers Association, which represents the largest pharmaceutical firms; (see S. 2729, 91st Congress, 1st Session, A bill to provide for the establishment of a National Drug Testing and Evaluation Center).

3. From personal observations of physicians' prescribing habits and the prescription-filling habits of pharmacists, I must disagree with the statement, "Every pharmacist is willing to place the name and strength of the active ingredient on the container if the physician so requests it." In fact, such labelling instructions are often not carried out.

4. Statistics on drug costs were presented misleadingly by Dr. Hassan, who cites the American Enterprise Institute claim that prescription drug costs have actually fallen by 1.4 percent over the past five years. Rational prescribing by all doctors and dispensing of generic products might have cut costs even more. Dr. Hassan missed the point made by Dr. Burack and picked up by a more favorable reviewer of the book: cost-effectiveness must be considered by physicians in their dealings with patients. Widespread use of generic drugs would have saved a lot of money, but the greatest saving would have been had doctors prescribed nothing at all for many more patients.

5. Dr. Hassan states, "To rely on price data alone would be a mistake." He really recommends no consideration of price data. If and when National Health Insurance becomes effective, physicians will be expected to know something about drug costs. Dr. Burack's book is really the first accessible source of such information outside the pharmacist's *Red Book*.

6. The book *does* give information to physicians and patients which makes it possible "to effectively cut your bills for medications" right now. For example, a Harvard teaching hospital purchases mainly brand-name products, and even with discounts obtained through pooled pur-

chasing a bulk order, still pays twice as much as necessary for many common drugs. Negotiations will shortly be underway to change the purchasing patterns of this hospital to pass on savings to patients. Some physicians in Boston and suburbs have found a few pharmacies that stock generic products extensively; through these pharmacies, patients have saved money.

In a recent, well-publicized episode, the Mayor of Boston proposed that pharmacists post retail prices of some commonly prescribed products. The organization of retail pharmacists opposed him as it also opposed the licensing of pharmacies "specializing" in generic, cheaper drugs. Retail profits are higher when expensive, brand-name products are sold. Price competition among pharmacies is somehow unethical. In a real sense, the reasons that a change in prescribing habits on the part of physicians will not necessarily be reflected in lower costs to patients, can be ascribed to pharmacists. (It is a matter of some curiosity to me that Dr. Hassan's views are so close to those of the pharmacists and the drug industry).

FREDERICK J. FOX '72

To the Editor:

I am writing to protest the review of Dr. Burack's *The New Handbook of Prescription Drugs*. Dr. Burack has made a significant contribution by publicizing that the cost of drugs is scandalously unrelated to the cost of the chemical products they contain. That the medical profession and the drug consumer are almost powerless in dealing with the corporate strength of the drug companies is an important problem in American medicine. Dr. Burack has shown one way to modify the power of the large drug companies. Dr. Hassan's review is absurd because he dismisses Dr. Burack's concern for the consumer's interest by quoting the American Enterprise Institute to assure us that prices in the drug industry are reasonable. How naively paternalistic.

